

REMARKS

Claims 27-53 are active in this application. Support for these claims is found in claims 1-26 and the specification as originally filed. No new matter is added.

The present invention is not described in the prior art cited by the Examiner because this prior art does not describe a single layer with a plurality of microcavities or a method of forming the same. The following discussion will explain in more detail these differences.

Teoule et al (U.S. patent no. 5,837,859) describe electroconductive polymer/nucleotide copolymers that can be deposited onto one or more electrodes (see col. 5, lines 5-32). These coated electrodes can be further fixated with a biological probe such as, for example, an oligonucleotide. However, in the Teoule et al process, and therefore the device resulting from the process, requires coating a different electrode for the fixation of each additional oligonucleotide (see, for example, col. 5, lines 24-32 and Figures 11 and 12). As a result, for each additional different oligonucleotide probe, a new coated electrode must be provided. Clearly then Teoule et al is different from the present invention, which provides structuring a biochip with a layer of material forming microtroughs, wherein in each microtrough the same oligonucleotide can be chemically fixated or different multiple biological probes, such as oligonucleotides, can be chemically fixated.

As a result, the present claims are not anticipated by the Teoule et al and therefore, Applicants request withdrawal of the rejection under 35 U.S.C. § 102(b) over Teoule et al.

Similarly, the claimed invention is not described in Livache et al, who describe the polymerization of various biomolecules via a pyrrole polymerization process onto a multi-electrode support whereby each biomolecule is attached to an individual and different electrode (see page 629, col. 2, second paragraph, page 631, col. 1, last paragraph and page 632, col. 1, "3.2 Copolymerization of pyrrole on microelectrodes"). Thus, Livache et al do not describe structuring a biochip with a layer of material forming microtroughs, wherein in

each microtrough the same oligonucleotide can be chemically fixated or different multiple biological probes, such as oligonucleotides, can be chemically fixated

As a result, the present claims are not anticipated by the Livache et al disclosure and therefore, Applicants request withdrawal of the rejection under 35 U.S.C. § 102(b) over Livache et al.

As Livache et al singularly or in combination with Teoule describe structuring a biochip with a layer of material forming microtroughs as provided in the present claims, the present claims are also not obvious in light of these two publications. Therefore, withdrawal of the rejection under 35 U.S.C. § 103(a) over Teoule et al in view of Livache et al is requested.

Simon et al is relied upon to provide N-(3-trimethoxy silyl) propyl) pyrrole as a silanization agent (see page 12 of the Office Action). However, even when Teoule et al is combined with Simon et al there is no description or suggestion for structuring a biochip with a layer of material forming microtroughs as provided in the present claims. Therefore, withdrawal of the rejection under 35 U.S.C. § 103(a) over Teoule et al in view of Simon et al is requested.

Lizardi et al is relied upon to teach gluteraldehyde as a cross-linking reagent (see page 13 of the Office Action). However, even when Teoule et al is combined with Lizardi et al there is no description or suggestion for structuring a biochip with a layer of material forming microtroughs as provided in the present claims. Therefore, withdrawal of the rejection under 35 U.S.C. § 103(a) over Teoule et al in view of Lizardi et al is requested.

Heroux et al is relied upon to teach functionalizing an oligonucleotide with a thiol group (see page 14 of the Office Action). However, even when Teoule et al is combined with Heroux et al there is no description or suggestion for structuring a biochip with a layer of

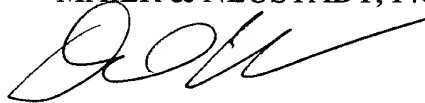
material forming microtroughs as provided in the present claims. Therefore, withdrawal of the rejection under 35 U.S.C. § 103(a) over Teoule et al in view of Heroux et al is requested.

The rejection of Claim 1-26 under 35 U.S.C. § 112, second paragraph is obviated by the cancellation of the claims.

Applicants submit that the present application is ready for allowance. Early notice of such allowance is requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAJER & NEUSTADT, P.C.



Norman F. Oblon
Attorney of Record
Registration No. 24,618

Daniel J. Pereira, Ph.D.
Registration No. 45,518



22850

Tel.: (703) 413-3000
Fax: (703) 413-2220

Docket No.: 208718US0PCT
Marked-Up Copy
Serial No: 09/868,043
Amendment Filed on: HERewith

IN THE CLAIMS

Claims 1-26 are canceled.

Claims 28-53 are added.